

AMENDMENTS TO THE DRAWINGS:

Replacement drawings in compliance with 37 CFR §1.84 and 37 CFR §1.121 are being provided separately. Figure 0 has been renumbered as Figure 6, and has been amended to indicate that the figure depicts prior art. Figure 1 has been amended to remove the references “FIG. 1A” and “FIG. 1B.” Figure 5 has been amended to include reference numeral 143 (“the barrel-lifting ram 143” in paragraph [0056]). Annotated sheets with mark-ups and a complete set of replacement drawings accompany this Amendment.

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REMARKS

The claims have been amended to correct informalities, to address the claim objection (claim 3) and the 112 rejections (claims 9 and 22). In particular, claims 9 and 22 have been amended to recite “a high-pressure barrel assembly lifting unit.” Support for the claim amendments can be found throughout Applicant’s disclosure, for example in Figures 2 and 5 and paragraphs [0043 - 0044]. The specification has been amended to correct informalities, as suggested by the Examiner. Moreover, replacement drawings are submitted in accordance with 37 CFR 1.121(d), along with annotated sheets. Marked-up annotated drawings are provided along with a full set of replacement drawings. The drawings were amended to renumber Figure 0 as Figure 6, and to label the drawings as prior art, remove the references “FIG. 1A” and “FIG. 1B” and to add reference numeral 143 to Figure 5. Support for the amendment to Figure 5 can be found, for example, at paragraph [0056] of the specification. The specification also has been amended to reflect changes in the drawing numbering. No new matter has been added by any of the foregoing amendments.

It is respectfully submitted that the objections to the drawings, the specification, and claim 3 are rendered moot by the present amendment. Moreover, it is respectfully submitted that the rejection of claims 9 and 22, under 35 U.S.C. § 112, second paragraph, is overcome by the present amendment. The claims also have been amended to eliminate “means” language, and application of 35 USC 112, 6th paragraph.

Turning to the art rejections, and considering first the rejection of claims 1-9 and 11-22 under 35 U.S.C. § 102(b) as being anticipated by Bergman et al. (U.S. Pat. No. 5,579,682; hereinafter “Bergman”), Applicant’s independent claims 1 and 11 each require, in part, “at least one clamping piston adapted to preload the end closure(s) and the high-pressure barrel

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assembly . . . in order to overbalance anticipated internal end loads.” At a minimum, it is respectfully submitted that Bergman fails to disclose this feature of claims 1 and 11.

Bergman teaches a device for high-pressure treatment of liquid substances that includes end members (2 and 3), cylinder member (1), a plunger (15), spacing block (20) and press frame (21). However, Bergman fails to disclose, or even provide any teaching or suggestion of, “at least one clamping piston adapted to preload the end closure(s) and the high-pressure barrel assembly . . . in order to overbalance anticipated internal end loads,” as required by independent claims 1 and 11. The Office Action erroneously equates Bergman’s press frame (21) to the “clamping piston” required by claims 1 and 11. Rather than disclosing a clamping piston, Bergman can merely be said to, at best, teach a contra piston. That is, the spacing block and press frame merely serve as a closure, and thus transfer a balancing load to the tension frame. See, e.g., Bergman, col. 7, lines 4-17. As such, the end load generated by the cylinder and piston in Bergman will apply a cyclic load to the frame with every pressure cycle experienced by the device.

In contrast, Applicant’s independent claims 1 and 11 require “at least one clamping piston adapted to preload the end closure(s) and the high-pressure barrel assembly . . . in order to overbalance anticipated internal end loads.” Thus, the overbalancing end load on the tension frame is maintained constant throughout cyclic operation of the intensifier and makes the tension frame virtually immune from fatigue. Fatigue relief is a vital consideration in the design of high-pressure systems and is an important feature of the claimed invention.

For at least the foregoing reasons, it is respectfully submitted that Bergman cannot be said to anticipate, or even render obvious, either of Applicant’s independent claims 1 and 11.

Each of claims 2-9 and 12-22 depend upon one of independent claims 1 and 11, as the case

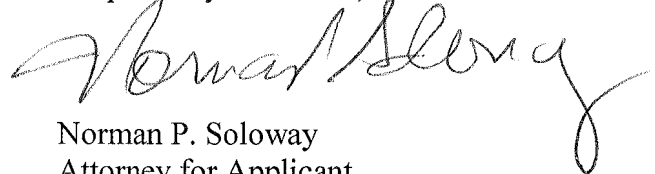
may be, and are therefore allowable over Bergman for at least the same reasons adduced above relative to independent claims 1 and 11, as well as for their own additional limitations.

Turning now to the rejection of claims 10 and 23 under 35 U.S.C. § 103(a) as being unpatentable over Bergman in view of Jansson et al. (U.S. Pat. No. 5,904,089; hereinafter "Jansson"), claim 10 depends upon independent claim 1 and claim 23 depends upon independent claim 11. The deficiencies of Bergman vis-à-vis independent claims 1 and 11 are discussed above. Jansson fails to overcome these deficiencies. That is, at a minimum, Jansson fails to teach or suggest "at least one clamping piston adapted to preload the end closure(s) and the high-pressure barrel assembly . . . in order to overbalance anticipated internal end loads." Thus, even assuming *arguendo* that the Examiner has correctly characterized the teachings of Jansson, it is respectfully submitted that no combination of Bergman with Jansson can reasonably be said to render obvious either of Applicant's independent claims 1 and 11, nor claims 10 and 23 which rely thereon, as the case may be.

Having dealt with all the objections raised by the Examiner, the Application is believed to be in order for allowance. Early and favorable action is respectfully requested.

In the event there are any fee deficiencies or additional fees are payable, please charge them (or credit any overpayment) to our Deposit Account No. 08-1391.

Respectfully submitted,



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